REMARKS:

Claims 28 through 31 and 55 stand rejected under 35 USC 102(b) as being anticipated by Wierzba '191. Claims 28 through 35, 39 through 51 and 55 stand rejected under 35 USC 103(a) as being unpatentable over Rajala et al '347 in view of Wierzba '191. Claims 36 and 37 stand rejected under 35 USC 103(a) as being unpatentable over a Wierzba '191 as applied to claim 28 in further view of Wendelstorf et al '260. Claims 36 and 37 stand rejected under 35 USC 103(a) as being unpatentable over Rajala '347 and Wierzba '191 as applied to claim 28 in further view of Wendelstorf '260. Claims 52 through 54 stand rejected under 35 USC 103(a) over Rajala '347 and Wierzba et al '191 as applied to claim 55 in further view of Blumenthal et al '217.

In response to these rejections, the applicant has amended independent claims 28 and 55 to include limitations extracted from claims 40 and 41, which have been amended accordingly. The applicant submits that claims 28 and 55 as amended are distinguished from the prior art of record for the following reasons.

In rejecting former claim 40 on page 6 of the instant office action, the Examiner argues that Rajala discloses an anvil roller having a radius of curvature ranging between 4.2mm to 873.4mm. However, this very broad range cannot be construed to teach the narrow limitation contained in claims 28 and 55 of 50 to 250mm, since the broad range of Rajala fails to teach the narrow range recited in amended claims 28 and 45 with sufficient specificity. The Examiner is referred in particular to MPEP 2131.03 II which is cited below for the convenience of the Examiner. The case law in the subsequent recitation is hereby incorporated by reference.

" PRIOR ART WHICH TEACHES A RANGE OVERLAPPING OR TOUCHING THE CLAIMED RANGE ANTICIPATES IF THE PRIOR ART RANGE DISCLOSES THE CLAIMED RANGE WITH "SUFFICIENT SPECIFICITY"

When the prior art discloses a range which touches or overlaps the claimed range, but no specific examples falling within the claimed range are disclosed, a case by case determination must be made as to anticipation. In order to anticipate the claims, the claimed subject matter must be disclosed in the reference with "sufficient specificity to constitute an anticipation under the statute." What constitutes a "sufficient specificity" is fact dependent. If the claims are directed to a narrow range, and the reference teaches a broad range, depending on the other facts of the case, it may be reasonable to conclude that the narrow range is not disclosed with "sufficient specificity" to constitute an anticipation of the claims. See, e.g., *Atofina v. Great Lakes Chem. Corp*, 441 F.3d 991, 999, 78 USPQ2d 1417, 1423 (Fed. Cir. 2006) wherein the court held that a reference temperature range of 100-500 degrees C did not describe the claimed range of 330-450 degrees C with sufficient specificity to be anticipatory. Further, while there was a slight overlap between the reference's preferred range (150-350 degrees C) and the claimed range, that overlap was not sufficient for anticipation. "The disclosure of a range is no more a disclosure of the end points of the range than it is each of the intermediate points." Id. at 1000, 78 USPQ2d at 1424. Any evidence of unexpected results within the narrow range may also render the claims unobvious. The question of "sufficient specificity" is similar to that of "clearly envisaging" a species from a generic teaching. See MPEP § 2131.02. A 35 U.S.C. 102/103 combination rejection is permitted if it is unclear if the reference teaches the range with "sufficient specificity." The examiner must, in this case, provide reasons for anticipation as well as a reasoned statement

regarding obviousness. *Ex parte Lee*, 31 USPQ2d 1105 (Bd. Pat. App. & Inter. 1993) (expanded Board). For a discussion of the obviousness of ranges see MPEP § 2144.05."

Applying this case law to the broad recitations suggested by the Rajala reference clearly leads to the conclusion that the broad range cannot anticipate the narrow range as now claimed. In particular, the lower limit disclosed by Rajala exceeds the lower limit of the claimed range by more than a factor of 10 and the upper range exceeds the upper range of the claimed range by in excess of a factor of 3. Moreover, Rajala provides no specific disclosure for a particular value of the radius of curvature which is within the claimed range, therefore failing to meet the requirements of the above cited case law as accepted for the guidelines of patent examination at the US PTO. This feature therefore remains missing from the prior art of record.

On page 6 of the office action, in the middle of the page, the Examiner refers to the Wierzba reference and states that Wierzba teaches that the roller should be substantially flat but warns that if the surface is excessively flat, the leading and trailing edges in the machine direction would be above the periphery curvature of the roller, resulting in possible interference of the web or cut off knife. The Examiner therefore suggests that Wierzba encourages optimization of the radius of curvature away from a perfectly flat value. The applicant respectfully disagrees with this interpretation of the Wierzba reference for the following reasons. The Examiner 's attention is referred, in particular, to column 5 of Wierzba, lines 36 through 49. in this section of the Wierzba reference, Wierzba clearly states that the possible interference between the raised edges of the carrier block 70 and the cut off knife 66 is not compensated for or avoided by increasing the curvature of the carrier block 70, rather by incorporating a mechanism involving acme screw thread 86, and a stationary threaded nut 88, secured to the transport roller 42 which, in

correspondence with the revolution of the carrier block 70 in the transfer roller, causes retraction of the carrier block 70 within the transfer roller to avoid interference with the cut off knife 66. Therefore, contrary to the position taken by the Examiner, Wierzba does not propose curving the carrier block 70 in order to avoid interference with the carrier knife 66.

Examination of the Wierzba reference clearly shows that the carrier block 70 is completely flat. This can be seen by the section of figure 7 which clearly shows that the top portion of the carrier block 70 is flat. Moreover, it must be observed that the carrier block 70 rotates through 90° from the position in which the adhesive material 32 is cut and transferred to the transfer roller 42 to the position at which it is applied to substrate 26. This is clearly stated in the Wierzba disclosure beginning in column 4 at line 66 and extending through column 5 lines 49. For this reason, Wierzba must avoid substantial curvature of the carrier block 70, since a curved block 70 would no longer be capable of properly seating the adhesive tape on substrate 26 following rotation through 90 degrees. Therefore, Wierzba provides no motivation for optimization of the radius of the substantially flat carrier block for whatever reason.

On the bottom of page 6 extending to the top of page 7 the Examiner states that one of average skill of the art would have been motivated to produce an anvil radius of curvature which is at least 2 times the peripheral radius of curvature because such a calculation would be within his technical grasp. The Examiner thereby quotes KSR Int'l Co. v. Teleflex Inc. stating that the motivation is provided by a good reason to pursue a known option which leads to anticipated success. The applicant specifically disagrees with this interpretation of the Wierzba-Rajala combination in the rejection of claim 41 for the following reasons.

In particular, there must be some motivation for optimizing a particular range. The fact that the range can be optimized is not sufficient to

provide motivation for the optimization. Moreover, the motivation must be present within the prior art of reference per se. Towards this end, the Examiner 's attention is referred to MPEP 2144.05 II.B which is quoted below for the Examiner's convenience. The references quoted therein are hereby incorporated by reference.

> "B. Only Result-Effective Variables Can Be Optimized
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> A particular parameter must first be recognized as a result-effective variable, i.e., a variable that achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977) (The claimed wastewater treatment device had a tank volume to contractor area of 0.12 gal./sq. ft. The prior art did not recognize that treatment capacity is a function of the tank volume to contractor ratio, and therefore the parameter optimized was not recognized in the art to be a result-effective variable.). See also *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) (prior art suggested proportional balancing to achieve desired results in the formation of an alloy)."

Based on this portion of the MPEP examination guidelines followed by the US PTO, motivation in support of optimization of a given parameter can only be assumed if that parameter has been recognized as a result effective variable, that is to say a variable that achieves a recognized result. In order to apply this case law to the instant invention, it is necessary to explore the relationship which is optimized by the claim ranges in accordance with claims 28 and 55 as amended.

The claimed inventive ranges for the radii of curvatures constitute a compromise between two conflicting goals. One goal involves the fact that the cut section is often rather stiff. Accordingly, it is difficult to

transport the cut section from the supply roller to the first material web without inducing slippage, in particular, when the radius of curvature of the surface of the anvil roller contacting the transported section is small. It is therefore advantageous to have the radius of curvature of the anvil roller be as large as possible. However, since the anvil roller must be accelerated and decelerated during each transfer cycle of the cut off section to the first material web in order to avoid slippage, an anvil roller having a large radius of curvature also has a large rotational moment of inertia, thereby rendering the acceleration and deceleration processes more difficult. In order to address these two conflicted goals, the invention proposes utilization of an anvil roller having a small radial size: however with an external carrier surface having a radius of curvature which is not equal to the radius of curvature of the periphery of the anvil roller, rather which is significantly larger than that radius of curvature. This allows for an anvil roller having a small rotational moment of inertia which nevertheless has a sufficiently flat curvature for acceptance of stiff cut off sections, without slippage. The ranges now recited in claim 28 and 55 are ranges selected for optimization of this compromise.

One of average skill in the art, aware of the Wierzba and Rajala references would perceive no motivation to optimize possible values of the radius of curvature of the anvil radii relative to the radius of curvature of the periphery of the anvil roller, since none of these prior arts of record recognize the fundamental relationship between these two variables with respect to the acceleration of the anvil roller during transfers of a relatively stiff cut off section. In fact, Wierzba does not use an acceleration and deceleration process with the anvil roller, rather teaches an anvil roller which rotates at constant speed. This necessarily leads to slippage prior to cutting. Rajala fails to recognize the problem addressed by the instant invention and accordingly can not suggest that curvature is the key to solving that problem. Therefore, these references fail to satisfy the requirements of the case law cited in the MPEP and

therefore cannot be used in the current manner exercised by the Examiner.

The invention recites a particular combination of parameter ranges which leads to optimized transfer of a cut off section without slippage in a cut and paste procedure involving acceleration and deceleration of an anvil roller, thereby providing proper functioning of the transfer process with minimization of wear and failure probabilities associated with the torques generated through acceleration and deceleration of the anvil roller. None of the prior art of record fairly teaches or suggests these parameter values or the advantages associated therewith. The invention is therefore sufficiently distinguished from that prior art to satisfy the conditions for patenting in the United States. The dependent claims of record inherit the limitations of the respective independent claims and are therefore similarly distinguished from the prior art of record for the reasons given. The US PTO is therefore requested to pass this application on to issuance.

No new matter has been added in this amendment.

Respectfully submitted,

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